

I claim:

1. A method of curing a coating of an optical fiber, comprising:  
passing an optical fiber through a coating die;  
applying a coating to said optical fiber; and  
5 curing said coating on said optical fiber,  
wherein said curing is at least partially effected by exposing said coating to  
ultrasound.
2. The method of curing a coating of an optical fiber as claimed in claim 1,  
10 wherein said exposing step occurs during at least one of said applying and said curing  
steps.
3. The method of curing a coating of an optical fiber as claimed in claim 1,  
wherein said exposing step occurs during both said applying step and said curing step.
- 15 4. The method of curing a coating of an optical fiber as claimed in claim 1,  
wherein said ultrasound is a frequency within the range of  $2^4$  to  $10^9$  Hz.
5. The method of curing a coating of an optical fiber as claimed in claim 1,  
20 wherein said curing step comprises exposing said coating to UV radiation.
6. The method of curing a coating of an optical fiber as claimed in claim 1,  
wherein said ultrasound is applied in pulses.

7. The method of curing a coating of an optical fiber as claimed in claim 1,  
wherein said exposing step occurs after said coating step and prior to said curing step.

5 8. The method of curing a coating of an optical fiber as claimed in claim 1,  
wherein said exposing step occurs prior to said fiber passing through said coating die  
and said curing step.

10 9. The method of curing a coating of an optical fiber as claimed in claim 1,  
wherein said coating is at least partially cured during said curing step and said  
exposing step occurs after said curing step.

10. A method of curing a coating of an optical fiber, comprising:  
passing an optical fiber through at least a coating stage and a curing stage,  
15 wherein a coating is applied to said fiber during said coating stage and curing of said  
coating is effected by exposing said coating to at least UV radiation and ultrasound.

20 11. The method of curing a coating of an optical fiber as claimed in claim 10,  
wherein both of said UV radiation and ultrasound are applied to said coating during  
said curing stage.

12. The method of curing a coating of an optical fiber as claimed in claim 10,  
wherein said ultrasound is a frequency between  $2^4$  to  $10^9$  Hz.

13. The method of curing a coating of an optical fiber as claimed in claim 10, wherein said ultrasound and said UV radiation are applied to said coating at the same time.

14. The method of curing a coating of an optical fiber as claimed in claim 10, wherein said ultrasound is applied in pulses.

15. The method of curing a coating of an optical fiber as claimed in claim 10, wherein said exposing step occurs after said coating step and prior to said curing step.

16. The method of curing a coating of an optical fiber as claimed in claim 10, wherein said fiber is exposed to said ultrasound prior to said fiber passing through said coating stage.

17. The method of curing a coating of an optical fiber as claimed in claim 10, wherein said coating is at least partially cured during said curing step and said exposing step occurs after said curing step.

18. An apparatus for curing a coating on an optical fiber, comprising:  
an optical fiber draw tower along which an optical fiber is drawn, comprising:  
a coating die, through which said optical fiber passes to receive a coating; and

a curing device located downstream from said coating die to cure said  
coating, and  
at least one ultrasonic transducer emitting ultrasound and coupled to said draw  
tower,  
5 wherein curing of said coating is at least partially effected by said ultrasound.

19. The apparatus claimed in claim 18, wherein said at least one ultrasonic  
transducer is coupled to at least one of said coating die and said curing device.

10 20. The apparatus claimed in claim 18, having at least two ultrasonic transducers,  
wherein both of said coating die and said curing device are coupled to at least one of  
said at least two ultrasonic transducers.

15 21. The apparatus claimed in claim 18, wherein said curing device comprises a  
UV radiation emitting device.

22. The apparatus claimed in claim 18, wherein said curing device comprises a  
UV radiation emitting device and said at least one ultrasonic transducer.

20 23. The apparatus claimed in claim 18, wherein said at least one ultrasonic  
transducer emits ultrasound in pulses.

24. The apparatus claimed in claim 18, wherein said at least one ultrasonic transducer emits a frequency in the range of  $2^4$  to  $10^9$  Hz.

25. The apparatus claimed in claim 18, wherein said at least one ultrasonic transducer is coupled to said draw tower upstream of at least one of said coating die and said curing device.

26. The apparatus claimed in claim 18, wherein said at least one ultrasonic transducer is coupled to said draw tower downstream of at least one of said coating die and said curing device.

27. The apparatus claimed in claim 18, wherein said at least one ultrasonic transducer makes contact with said coating.

28. The apparatus claimed in claim 18, having at least two ultrasonic transducers both of which make contact with said coating.

29. The apparatus claimed in claim 18, wherein said at least one transducer is located downstream of said curing device and makes contact with said coating.

30. A method of curing a coating of an optical fiber, comprising:  
passing an optical fiber through a coating die;  
applying a coating to said optical fiber; and

curing said coating on said optical fiber by vibrating said coating in an ultrasonic frequency.

31. The method as claimed in claim 30, wherein said ultrasonic frequency is in the range of  $2^4$  to  $10^9$  Hz.

32. The method as claimed in claim 30, wherein said curing step further comprises exposing said coating fiber to UV radiation.